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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,139	01/31/2001	Hernan G. Otero	21710-68377	5404
28062	7590	10/19/2004	EXAMINER	
BUCKLEY, MASCHOFF, TALWALKAR LLC 5 ELM STREET NEW CANAAN, CT 06840			BORLINGHAUS, JASON M	
			ART UNIT	PAPER NUMBER
			3628	

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/773,139

Applicant(s)

OTERO ET AL.

Examiner

Jason M. Borlinghaus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/31/01, 2/11/03</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.
2. The oath or declaration is defective because: Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it fails to describe the disclosure sufficiently and merely repeats information contained within the title.

Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1–7 and 8–9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Software, programming, instructions or code not claimed as encoded on computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in a computer. When such descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases.

Furthermore, software, programming, instructions or code not claimed as being computer executable are not statutory because they are not capable of causing functional change in a computer. In contrast, when a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer and the program, and the computer is capable of executing the program, allowing the program's functionality to be realized, the program will be statutory.

Claims 1–7 and 8–9 are therefore rejected where there is no indication that the proposed software is recorded on computer-readable medium and/or capable of execution by a computer. Examiner suggests that the applicant incorporate into Claims 1–7 and 8–9 language that the proposed software is

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recorded on computer-readable medium and capable of execution by a computer to overcome this rejection.

Correction required. See MPEP § 2106 [R-2].

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 8–9, 19–~~21~~ and 23–27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 8 and 19, it cannot be clearly understood whether the applicant is merely numbering the claims' components – “first” and “second” component – or is referring, specifically, to “a first algorithm plug-in” or “a second market plug-in.” The examiner suggests that the applicant remove from Claim 8 and 19 the comma located in the phrases “a first, algorithm plug-in for implementing a trading strategy” and “a second, market plug-in for implementing a trading strategy” for the purpose of grammatical clarity.

Regarding Claims 23–27, the claims cannot be clearly understood due to the redundant nature of the phrase “in the medium”, since execution of a computer-readable signal bearing medium, as stated in the beginning of Claim 23, implies that Claims 23–27 are recorded on that medium. The examiner

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suggests that the applicant remove from Claims 23-27 the phrase "in the medium" to avoid redundancy.

Regarding Claims 23-27, it cannot be clearly understood whether the applicant is claiming the overall structure of the computerized trading system or is claiming the technology used in creating the connection between the plug-ins and the engine. The examiner, assuming that the applicant intends the latter interpretation, suggests that the applicant remove from Claims 23-27 the phrases "for providing" and "for substituting" to improve the clarity of Claims 23-27.

Regarding Claims 9, 20 and 21, the claims cannot be clearly understood due to the open-ended nature of the Markush group. A Markush group must be definite and complete as to its membership. The Markush group in Claims 9, 20 and 21 are indefinite as to scope in the use of the term "comprising" in the phrase "comprising: Volume Weighted Average Price; Ratio; Gamma Hedge; Aggressive Short Sell; Iceberg; Auto Trader; CB Delta Hedge; Stop Loss; and Short Sell". Examiner suggests that the applicant replace the phrase "comprising" with the phrase "consisting of" to overcome this rejection.

Correction is required. See MPEP § 2173.05 (h).

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1–4, 6–13, 15–21, and 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kane (U.S. Patent 6,317,728).

Regarding Claim 1, Kane discloses an apparatus for computerized trading comprising:

- a first plug-in (agent) for implementing a trading strategy (see col. 5, lines 5–10),
- a second plug-in (agent) for implementing a trading strategy (see col. 5, lines 5–10),
- an engine (executing device – see figure 1, 11) for providing services to either of said first or second plug-in (see col. 5, lines 45-55),
- whereby first plug-in is implemented in said engine in order to execute a trade (see col. 5, lines 45-55).

Regarding Claim 2, Kane discloses an apparatus wherein said second plug-in (agent) is implemented in said engine to execute said trade (see col. 5, lines 45-55).

Regarding Claim 3, Kane discloses an apparatus wherein said first plug-in (agent) further comprises an algorithm ("rules and logic which evaluate market and specific equity behaviors") plug-in that is implemented by the engine (see col. 7, lines 9-12).

Regarding Claim 4, Kane discloses an apparatus wherein said second plug-in (agent) further comprises a market ("rules and logic which evaluate market and specific equity behaviors") plug-in that is implemented by the engine (col. 7, lines 9-12).

Regarding Claim 6, Kane discloses an apparatus further comprising a third plug-in (agents) whereby said third plug-in is substituted ("update of trading rules and settings") for said first plug-in in said engine (see col. 13, line 37-46).

Regarding Claim 7, Kane discloses an apparatus further comprising a fourth plug-in (agents) whereby said fourth plug-in is substituted ("update of trading rules and settings") for said second plug-in in said engine (see col. 13, line 37-46).

Regarding Claim 8, Kane discloses an apparatus for computerized trading comprising:

- a first algorithm plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),
- a second plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),
- an engine (executing device - figure 1, 11) for providing service to said first and second plug-ins, whereby said first and second plug-ins are implemented in said engine in order to execute a trade (see col. 5, lines 45-55),



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- a third algorithm plug-in (col. 7, lines 9-12),
- a fourth market plug-in (see col. 7, lines 9-12),
- whereby either of said third or fourth plug-ins (agents) may be substituted ("update of trading rules and settings") for either said first plug-in or second plug-in respectively, in said engine, in order to execute a trade (see col. 5, lines 45-55).

Regarding Claim 9, Kane discloses an apparatus wherein said first and third algorithm plug-ins (agents) implement trading strategies selected from a group comprising: Short Sell (see col. 19, lines 43-45).

Regarding Claim 10, Kane discloses a method for computerized trading comprising providing a first plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors"), providing a second plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors"), providing an engine (executing device) for providing services to either of said first or second plug-ins, and, executing a trade using said first plug-in implemented in said engine (see col. 5, lines 45-55).

Regarding Claim 11, Kane discloses a method wherein the step of executing a trade using first plug-in (agent) implemented in said engine further comprises the step of using said second plug-in (agent) implemented in said engine in order to execute said trade (see col. 5, lines 45-55).

Regarding Claim 12, Kane discloses a method wherein the step of using said first plug-in (agent) implemented in said engine further comprises using an

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algorithm plug-in ("buy and sell rules embedded in each agent") (see col. 5, lines 5–10).

Regarding Claim 13, Kane discloses a method wherein the step of using said second plug-in (agent) implemented in said engine further comprises using a market plug-in ("buy and sell rules embedded in each agent") (see col. 5, lines 5–10).

Regarding Claim 15, Kane discloses a method comprising the step of providing a third plug-in ("200 intelligent agents") (see 7, lines 9-12).

Regarding Claim 16, Kane discloses method comprising the step of substituting (update) said third plug-in for said first plug-in said engine (see col. 13, lines 37+).

Regarding Claim 17, Kane discloses a method comprising the step of providing a fourth plug-in ("200 intelligent agents") (see col. 7, lines 9-12).

Regarding Claim 18, Kane discloses method comprising the step of substituting (update) said third plug-in for said first plug-in said engine (see col. 13, line 37-46).

Regarding Claim 19, Kane discloses a method for computerized trading comprising:

- providing a first algorithm plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),

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- providing a second plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),
- providing an engine (executing device – figure 1, 11) for providing service to either of said first and second plug-ins,
- implementing said first and second plug-ins in said engine (see col. 5, lines 45-55),
- providing a third algorithm plug-in (see col. 7, lines 9-12).
- providing a fourth market plug-in (see col. 7, lines 9-12).
- substituting ("update of trading rules and settings") either of said third or fourth plug-ins for either of said first plug-in or said second plug-ins respectively, in said engine, in order to execute a trade (see col. 5, lines 45-55).

Regarding Claim 20, Kane discloses a method wherein the step of providing a first algorithm plug-in for implementing a trade strategy ("rules and logic which evaluate market and specific equity behaviors"), further comprise providing a first algorithm plug-in selected from a group comprising: Short Sell (col. 19, lines 43-45).

Regarding Claim 21, Kane discloses an article herein the step of providing a third algorithm plug-in for implementing a trade strategy ("rules and logic which evaluate market and specific equity behaviors"), further comprise providing a third algorithm plug-in selected from a group comprising: Short Sell (col. 19, lines 43-45).

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Regarding Claim 23, Kane discloses an article for executing computerized trading comprising:

- a computer-readable signal bearing medium
- means for a first plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),
- means for a second plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),
- means for an engine (executing device – figure 1, 11) for providing services to either of said first and second plug-in (agent), whereby said first plug-in is implemented in said engine in order to execute a trade(see col. 5, lines 45-55).

Regarding Claim 24, Kane discloses an article further comprising means for a third plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),.

Regarding Claim 25, Kane discloses an article further comprising means for a third plug-in (agent) to substitute ("update of trading rules and settings") for said first plug-in (agent) in said engine (see col. 13, lines 37-46).

Regarding Claim 26, Kane discloses an article further comprising means for a fourth plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12).

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Regarding Claim 27, Kane discloses an article further comprising means for a fourth plug-in (agent) to substitute ("update of trading rules and settings") for said first plug-in (agent) in said engine (see col. 13, lines 37-46).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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13. Claims 5, ~~14~~ and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of Barber (U.S. Patent 6,173,292).

Regarding Claim 5, Kane discloses a computerized trading system as relied upon in Claim 1 above. Kane does not teach that the apparatus, wherein the first and second plug-ins, and the engine, are constructed in Java.

Barber discloses a computerized system constructed in Java (col. 4, lines 58+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by constructing it in Java, as was done by Barber, to take advantage of the computer language's modular nature.

Regarding Claim 14, Kane discloses a computerized trading method as relied upon in Claim 10 above. Kane does not teach that the steps of providing a first plug-in for implementing a trading strategy, and providing an engine for providing services to either of said first or second plug-ins, further comprises providing Java versions of said first and second plug-ins and said engine.

Barber discloses a computerized system constructed in Java (col. 4, lines 58+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by constructing it in Java, as was done by Barber, to take advantage of the computer language's modular nature.

Regarding Claim 22, Kane discloses a computerized trading method as relied upon in Claim 19 above. Kane does not teach that the method further comprises of a step on initiating a recovery mechanism in the event of system failure.

Barber discloses a computerized system that does initiate a recovery mechanism in the event of system failure (col. 4, lines 65+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating a recovery mechanism in the event of system failure, as was done by Barber, to protect against data loss.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited to Lupien (U.S. Patent 5,101,353), Freeny (U.S. Patent 6,594,643) and Levine (U.S. Patent 6,233,566), are considered to be structures relevant to the claimed invention.

Lupien discloses a computerized securities trading system capable of accepting, implementing and executing trading algorithms.

Freeny discloses a computerized securities trading system capable of accepting, implementing and executing trading algorithms.


Levine discloses a computerized trading system for financial products constructed in Java.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Borlinghaus whose telephone number is (703) 308-9552. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (703) 308-0505. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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